

## **WHAT IS CLAIMED IS:**

1. A device, comprising:  
a substrate;  
an inorganic layer disposed over the substrate;  
an organic layer disposed on the inorganic conductive or semiconductive layer, such that the organic layer is in direct physical contact with the inorganic conductive or semiconductive layer;  
wherein the substrate is deformed such that there is a nominal radial or biaxial strain of at least 0.05 % relative to a flat substrate at an interface between the inorganic layer and the organic layer.
2. The device of claim 1, wherein the inorganic layer forms islands.
3. The device of claim 2, wherein the islands cover at most 50 % of the surface area of the substrate.
4. The device of claim 2, wherein the islands have a largest diameter of at least 70 microns.
5. The device of claim 2, wherein the islands have a largest diameter of at least 113 microns.
6. The device of claim 2, wherein the islands have a largest diameter of at least 141 microns.
7. The device of claim 2, wherein the islands have a largest diameter of at least 169 microns.
8. The device of claim 1, wherein the inorganic layer forms an island that is electrically connected to other islands by a conductive interconnect, and the organic layer is disposed over and is in direct physical contact with the interconnect.
9. The device of claim 1, wherein the inorganic layer forms an island that is electrically connected to other islands by a conductive interconnect, and there is an inorganic dielectric layer

disposed over the interconnect, and the organic layer is disposed over and is in direct physical contact with the inorganic dielectric layer.

10. The device of claim 1, wherein the device is an organic light emitting device.
11. The device of claim 10, wherein the organic layer further comprises an organic electron transport layer, an organic emissive layer, and an organic hole transport layer.
12. The device of claim 1, wherein the device is a photosensitive organic device.
13. The device of claim 12, wherein the organic layer further comprises a photoactive organic layer.
14. The device of claim 12, wherein the device is a solar cell.
15. The device of claim 12, wherein the device is a photodetector.
16. The device of claim 1, wherein the device is a transistor.
17. The device of claim 1, wherein the device is a memory.
18. The device of claim 1, wherein the device is an interconnect.
19. The device of claim 1, wherein the organic layer further comprises a small molecule organic layer.
20. The device of claim 1, wherein the organic layer further comprises a polymeric organic layer.
21. The device of claim 1, wherein the organic layer has a thickness of at least 110 nm.

22. The device of claim 21, wherein the organic layer has a thickness of at least 160.
23. The device of claim 1, wherein the deformed substrate forms a section of a sphere.
24. The device of claim 2, wherein the organic layer is a blanket layer that covers both inorganic conductive or semiconductive layer that forms as island, and exposed regions of the substrate near the island.
25. The device of claim 1, wherein the substrate is a metal foil.
26. The device of claim 1, wherein the substrate is a polymer.
27. The device of claim 1, wherein the inorganic layer is conductive or semiconductive.
28. The device of claim 1, wherein the inorganic material has a Young's modulus of at least 116 GPa, and a yield strength of at most 1.2 GPa.
29. The device of claim 1, wherein the substrate is deformed such that there is a nominal radial or biaxial strain of at least 1.5 % relative to a flat substrate at an interface between the inorganic layer and the organic layer.
30. A device, comprising:
  - a substrate;
  - an inorganic layer disposed over the substrate;
  - an organic layer disposed on the inorganic layer, such that the organic layer is in direct physical contact with the inorganic layer;
  - wherein the substrate is deformed such that there is a nominal axial strain of at least 5 % relative to a flat substrate at an interface between the inorganic layer and the organic layer.

31. A method of fabricating a device, comprising:  
depositing an inorganic conductive or semiconductive layer disposed over a substrate, the substrate having an original configuration;  
depositing an organic layer on the inorganic conductive or semiconductive layer, such that the organic layer is in direct physical contact with the inorganic conductive or semiconductive layer;  
deforming the substrate such that there is an average radial or biaxial strain of at least 0.05% relative to the original configuration.
32. The method of claim 31, wherein the substrate is deformed such that there is an average radial or biaxial strain of at least 1.5% relative to the original configuration
33. The method of claim 32, wherein the original configuration is a flat substrate.
34. The method of claim 31, wherein the substrate is plastically deformed.
35. The method of claim 31, wherein the substrate has a glass transition temperature, and the substrate is deformed at a temperature that exceeds its glass transition temperature.
36. The method of claim 31, wherein the substrate is deformed at a maximum strain rate of 1.5% per 50 minutes.
37. A device fabricated by the process of:  
depositing an inorganic conductive or semiconductive layer disposed over a substrate, the substrate having an original configuration;  
depositing an organic layer on the inorganic conductive or semiconductive layer, such that the organic layer is in direct physical contact with the inorganic conductive or semiconductive layer;  
deforming the substrate such that there is an average radial or biaxial strain of at least 0.05% relative to the original configuration.